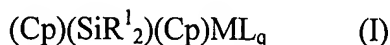


## AMENDMENTS TO THE CLAIMS

1. (currently amended) A process for preparing silicon-bridged metallocene compounds of formula (I):



wherein  $(\text{SiR}^1_2)$  is a divalent group bridging the two Cp rings, the  $\text{R}^1$  groups, equal to or different from each other, are hydrogen atoms, or linear or branched, saturated or unsaturated  $\text{C}_1\text{-C}_{20}$  alkyl,  $\text{C}_3\text{-C}_{20}$  cycloalkyl,  $\text{C}_6\text{-C}_{20}$  aryl,  $\text{C}_7\text{-C}_{20}$  alkylaryl or  $\text{C}_7\text{-C}_{20}$  arylalkyl groups, two  $\text{R}^1$  can optionally join to form a 3-7 membered ring;

Cp, equal to or different from each other, is a substituted or unsubstituted cyclopentadienyl group, optionally condensed to one or more substituted or unsubstituted, saturated, unsaturated or aromatic rings, containing from 4 to 6 carbon atoms, optionally containing one or more heteroatoms;

M is a transition metal belonging to group 3, 4, 5, 6 or to the lanthanide or actinide groups of the Periodic Table of the Elements (IUPAC version);

the substituents L, equal to or different from each other, are monoanionic sigma ligands selected from the group consisting of linear or branched, saturated or unsaturated  $\text{C}_1\text{-C}_{20}$  alkyl,  $\text{C}_3\text{-C}_{20}$  cycloalkyl,  $\text{C}_6\text{-C}_{20}$  aryl,  $\text{C}_7\text{-C}_{20}$  alkylaryl and  $\text{C}_7\text{-C}_{20}$  arylalkyl groups, optionally containing one or more Si or Ge atoms;

q is an integer ranging from 0 to 2, being equal to the oxidation state of the metal M minus 2;

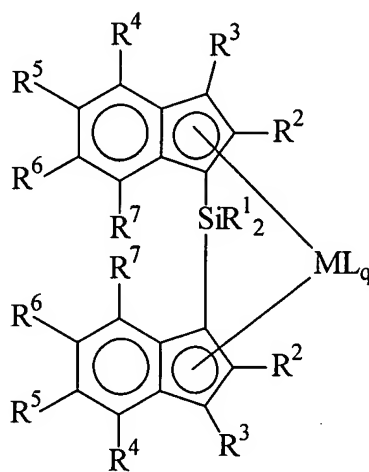
said process comprises the following steps:

- a) reacting, at a temperature of between  $-10^\circ\text{C}$  and  $70^\circ\text{C}$ , a ligand of formula  $(\text{Y-Cp})(\text{SiR}^1_2)(\text{Cp-Y})$  with about 2 molar equivalents of an alkylating agent of formula  $\text{TH}_w$ ,  $\text{L}_j\text{B}$  or  $\text{LMgL}'$ , wherein ~~Cp,  $\text{R}^1$ , and L have the meaning reported above;~~ T is lithium, sodium or potassium, H is an hydrogen atom, w is 0 or 1, when w is 0 the compound  $\text{TH}_w$  is metallic lithium, sodium or potassium, when w is 1 the compound of formula  $\text{TH}_w$  is an hydride of lithium, sodium or potassium; L' is an halogen atom selected from chlorine, bromine and iodine; B is an alkali or alkali-earth metal; and j is 1 or 2, j being equal to 1 when B is an alkali metal, and j being equal to 2 when B is an

alkali-earth metal; the groups Y, the same or different from each other, are suitable leaving groups;

- b) after the reaction has been completed, adding at least q molar equivalents of an alkylating agent of formula  $L_jB$  or  $LMgL'$ ; and
- c) reacting, at a temperature of between  $-10^\circ\text{C}$  and  $70^\circ\text{C}$ , the product obtained from step b) with at least 1 molar equivalent of a compound of formula  $ML'_s$ , wherein ~~M have the meaning reported above~~; s is an integer corresponding to the oxidation state of the metal and ranges from 3 to 6; and  $L'$  is an halogen atom selected from chlorine, bromine and iodine.

2. (currently amended) The process according to claim 1, for preparing a silicon-bridged metallocene compound of formula (II):



(II)

wherein:

~~M, L, q and R<sup>1</sup> have the meaning reported in claim 1;~~

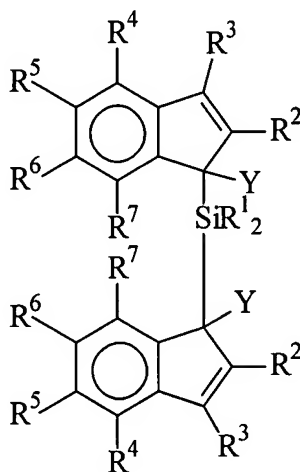
$R^2$ , equal to or different from each other, are hydrogen atoms or linear or branched, saturated or unsaturated  $C_1$ - $C_{20}$ -alkyl,  $C_3$ - $C_{20}$ -cycloalkyl,  $C_6$ - $C_{20}$ -aryl,  $C_7$ - $C_{20}$ -alkylaryl or  $C_7$ - $C_{20}$ -arylalkyl radicals, optionally containing heteroatoms belonging to groups 13-17 of the Periodic Table of the Elements;

$R^3$ ,  $R^4$ ,  $R^5$ ,  $R^6$  and  $R^7$ , equal to or different from each other, are hydrogen atoms or linear or branched, saturated or unsaturated  $C_1$ - $C_{20}$ -alkyl,  $C_3$ - $C_{20}$ -cycloalkyl,  $C_6$ - $C_{20}$ -aryl,  $C_7$ - $C_{20}$ -alkylaryl or  $C_7$ - $C_{20}$ -arylalkyl radicals, optionally containing heteroatoms belonging to

groups 13-17 of the Periodic Table of the Elements; two vicinal  $R^3$ ,  $R^4$ ,  $R^5$ ,  $R^6$  and  $R^7$  can also form one or more condensed 5 or 6 membered saturated or unsaturated rings optionally containing heteroatoms belonging to groups 13-16 of the Periodic Table of the Elements, said rings can bear alkyl substituents;

said process comprises the following steps:

- a) reacting, at a temperature of between  $-10^\circ\text{C}$  and  $70^\circ\text{C}$ , a ligand of formula (III)



(III)

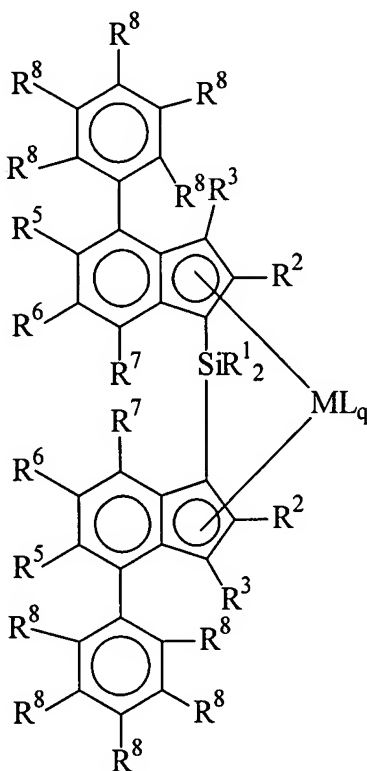
or one of its double bond isomers;

~~wherein  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$ ,  $R^5$ ,  $R^6$  and  $R^7$  have the meaning described above;~~ with about 2 molar equivalents of an alkylating agent of formula  $\text{TH}_w$ ,  $\text{L}_j\text{B}$  or  $\text{LMgL}'$ , wherein ~~L has the meaning reported above;~~ T is lithium, sodium or potassium, H is an hydrogen atom, w is 0 or 1, when w is 0 the compound  $\text{TH}_w$  is metallic lithium, sodium or potassium, when w is 1 the compound of formula  $\text{TH}_w$  is an hydride of lithium, sodium or potassium,  $\text{L}'$  is an halogen atom selected from chlorine, bromine and iodine; B is an alkali or alkali-earth metal; and j is 1 or 2, j being equal to 1 when B is an alkali metal, and j being equal to 2 when B is an alkali-earth metal; the groups Y, the same or different are suitable leaving groups;

- b) after the reaction has been completed, adding at least q molar equivalents, of a compound of formula  $\text{L}_j\text{B}$  or  $\text{LMgL}'$ ; and
- c) reacting, at a temperature of between  $-10^\circ\text{C}$  and  $70^\circ\text{C}$ , the product obtained from step b) with at least 1 molar equivalent of a compound of formula  $\text{ML}'_s$ , wherein ~~M have the meaning reported above;~~ s is an integer corresponding to the oxidation state of the metal

and ranges from 3 to 6; and L' is an halogen atom selected from chlorine, bromine and iodine.

3. (currently amended) The process according to ~~claims~~claim 1 ~~or~~ 2, for preparing a silicon-bridged metallocene compound of formula (IV):



(IV)

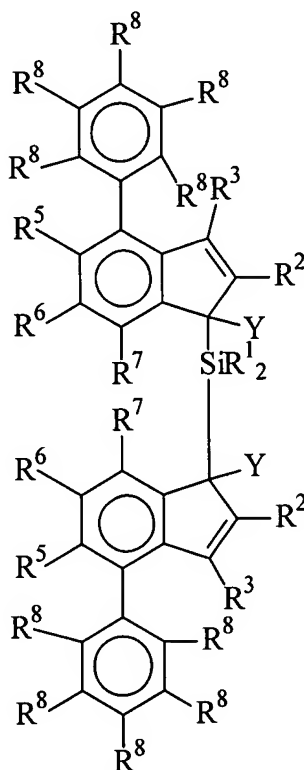
wherein:

M, L, q, R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>5</sup>, R<sup>6</sup> and R<sup>7</sup> have the meaning described in claims 1 or 2; R<sup>2</sup>, equal to or different from each other, are hydrogen atoms or linear or branched, saturated or unsaturated C<sub>1</sub>-C<sub>20</sub>-alkyl, C<sub>3</sub>-C<sub>20</sub>-cycloalkyl, C<sub>6</sub>-C<sub>20</sub>-aryl, C<sub>7</sub>-C<sub>20</sub>-alkylaryl or C<sub>7</sub>-C<sub>20</sub>-arylalkyl radicals, optionally containing heteroatoms belonging to groups 13-17 of the Periodic Table of the Elements;

R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup>, R<sup>6</sup> and R<sup>7</sup>, equal to or different from each other, are hydrogen atoms or linear or branched, saturated or unsaturated C<sub>1</sub>-C<sub>20</sub>-alkyl, C<sub>3</sub>-C<sub>20</sub>-cycloalkyl, C<sub>6</sub>-C<sub>20</sub>-aryl, C<sub>7</sub>-C<sub>20</sub>-alkylaryl or C<sub>7</sub>-C<sub>20</sub>-arylalkyl radicals, optionally containing heteroatoms belonging to groups 13-17 of the Periodic Table of the Elements; two vicinal R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup>, R<sup>6</sup> and R<sup>7</sup> can also form one or more condensed 5 or 6 membered saturated or unsaturated rings optionally containing heteroatoms belonging to groups 13-16 of the Periodic Table of the Elements, said rings can bear alkyl substituents;

and  $R^8$  is a hydrogen atom, or a linear or branched, saturated or unsaturated  $C_1$ - $C_{20}$ -alkyl,  $C_3$ - $C_{20}$ -cycloalkyl,  $C_6$ - $C_{20}$ -aryl,  $C_7$ - $C_{20}$ -alkylaryl or  $C_7$ - $C_{20}$ -arylalkyl radical, optionally containing heteroatoms belonging to groups 13-17 of the Periodic Table of the Elements; said process comprises the following steps;

- a) reacting, at a temperature of between  $-10^\circ\text{C}$  and  $70^\circ\text{C}$ , a ligand of formula (V)



(V)

or one of its double bond isomers;

~~wherein  $R^1, R^2, R^3, R^4, R^5, R^6, R^7$  and  $R^8$  have the meaning described above;~~

with about 2 molar equivalents of an alkylating agent of formula  $TH_w, L_jB$  or  $LMgL'$ ,  
 wherein ~~L has the meaning reported above;~~ T is lithium, sodium or potassium, H is an hydrogen atom, w is 0 or 1, when w is 0 the compound  $TH_w$  is metallic lithium, sodium or potassium, when w is 1 the compound of formula  $TH_w$  is an hydride of lithium, sodium or potassium,  $L'$  is an halogen atom selected from chlorine, bromine and iodine; B is an alkali or alkali-earth metal; and j is 1 or 2, j being equal to 1 when B is an alkali metal, and j being equal to 2 when B is an alkali-earth metal; the groups Y, the same or different from each other, are suitable leaving groups;

- b) after the reaction has been completed, adding at least q molar equivalents of a compound of formula  $L_jB$  or  $LMgL'$ ; and
  - c) reacting, at a temperature of between  $-10^\circ\text{C}$  and  $70^\circ\text{C}$ , the product obtained from step b) with at least 1 molar equivalent of a compound of formula  $ML'_s$ , wherein ~~M have the meaning reported above~~; s is an integer corresponding to the oxidation state of the metal and ranges from 3 to 6; and  $L'$  is an halogen atom selected from chlorine, bromine and iodine.
4. (currently amended) The process according to ~~anyone of claims~~claim 1 to 3 wherein step b) is carried out in a time ranging from 1 minute to 6 hours after step a).
5. (currently amended) The process according to ~~anyone of claims~~claim 1 to 4 wherein Y is a hydrogen atom or a  $-\text{SiR}_3$  or  $-\text{SnR}_3$  group, wherein the groups R are linear or branched saturated or unsaturated  $\text{C}_1\text{-C}_{20}$ -alkyl,  $\text{C}_3\text{-C}_{20}$ -cycloalkyl,  $\text{C}_6\text{-C}_{20}$ -aryl,  $\text{C}_7\text{-C}_{20}$ -alkylaryl or  $\text{C}_7\text{-C}_{20}$ -arylalkyl radicals.
6. (currently amended) The process according to ~~anyone of claims~~claim 1 to 5 wherein the metal M is Ti, Zr or Hf.
7. (currently amended) The process according to ~~anyone of claims~~claim 1 to 6 wherein the compounds  $ML_s$  are  $\text{ZrCl}_4$ ,  $\text{ZrBr}_4$ ,  $\text{ZrF}_4$ ,  $\text{HfCl}_4$ ,  $\text{HfBr}_4$ ,  $\text{HfF}_4$ ,  $\text{TiCl}_4$ ,  $\text{TiBr}_4$  and  $\text{TiF}_4[[:]]$ .
8. (currently amended) The process according to ~~anyone of claims~~claim 1 to 7 wherein in step b) at least  $1+q$  molar equivalents of a compound of formula  $L_jB$  or  $LMgL'$  ~~wherein  $L$ ,  $L'$  and B have the meaning as described in claim 1~~ is added.
9. (currently amended) The process according to ~~anyone of claims~~claim 1 to 8 wherein step a) and b) are carried out at a temperature ranging from  $-5^\circ\text{C}$  and  $+55^\circ\text{C}$ .
10. (currently amended) The process according to ~~anyone of claims~~claim 1 to 9 wherein step c) is carried out at a temperature ranging from  $0^\circ\text{C}$  and  $60^\circ\text{C}$ .